Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A datagram relaying apparatus comprising:

a plurality of protocol terminating units; and

a destination determining processor which comprises:

a path selecting section ~~which determines~~ to determine a transfer destination route for ~~each stream identifier of~~ a stream of packets received from any of said protocol terminating units based on a combination of a stream identifier and a multi-path identifier associated with the received stream of packets, wherein said path selecting section ~~determines~~ is configured to determine whether ~~or not~~ transfer of said received stream of packets to said transfer destination route is in an inhibition state, and ~~selects~~ select another transfer destination route when the transfer of the ~~packet~~ stream of packets to said transfer destination route is in the inhibition state.

2. (original) A datagram relaying apparatus according to claim 1, wherein said path selecting section determines said transfer destination route or said another transfer destination route based on a load distribution ratio previously set for each said transfer destination route.

3. (previously presented) A datagram relaying apparatus according to claim 2, wherein said path selecting section manages a stream count being currently allocated and a maximum stream count to be allocated, for each said transfer destination route, and determines

whether or not the transfer of said received steam of packets to said transfer destination route is in the inhibition state, based on comparison between the stream count being currently allocated and the maximum stream count to be allocated.

4. (original) A datagram relaying apparatus according to claim 3, wherein said path selecting section determines that the transfer of said received stream of packets to said transfer destination route is in the inhibition state, when the stream count being currently allocated is greater than the maximum stream count to be allocated.

5. (original) A datagram relaying apparatus according to claim 4, wherein said path selecting section determines whether or not the transfer of said received stream of packets to said another transfer destination route is in the inhibition state, when determining said another transfer destination route for said received stream of packets.

6. (previously presented) A datagram relaying apparatus according to claim 1, wherein said path selecting section manages a stream count being currently allocated and the maximum stream count to be allocated, for each said transfer destination route, and determines whether or not the transfer of said received stream of packets to said another transfer destination route is in the inhibition state, based on the comparison between the stream count being currently allocated and the maximum stream count to be allocated.

7. (previously presented) A datagram relaying apparatus according to claim 1, wherein said path selecting section manages a stream count being currently allocated and a maximum stream count to be allocated, for each said transfer destination route, and determines that the transfer of said received stream of packets to said another transfer destination route is in the inhibition state when the stream count being currently allocated is equal to or greater than the maximum stream count to be allocated.

8. (original) A datagram relaying apparatus according to claim 1, wherein said path selecting section monitors whether or not a fault has occurred on said transfer destination route, and assigns a stream of packets allocated to said transfer destination route to said another transfer destination route when said fault has occurred on said transfer destination route.

9. (original) A datagram relaying apparatus according to claim 8, wherein said path selecting section manages whether or not said fault has occurred, for every transfer destination route, and determines said another transfer destination route based on said faults managed for the respective transfer destination routes.

10. (original) A datagram relaying apparatus according to claim 9, wherein said path selecting section manages the transfer destination routes individually based on single data.

11. (original) A datagram relaying apparatus according to claim 1, wherein said path selecting section determines said another transfer destination route based on a predetermined order.

12. (currently amended) A datagram relaying apparatus according to claim 1, wherein said path selecting section manages a maximum stream count to be continuously allocated, for each said transfer destination route, and continuously determines said another transfer destination ~~routes~~ route for said received stream of packets [[to]] based on the maximum stream count to be continuously allocated, and then determines still another transfer destination route for another received stream of packets.

13. (original) A datagram relaying apparatus according to claim 1, wherein said path selecting section changes said transfer destination route each time said transfer destination route is determined.

14. (currently amended) A datagram relaying apparatus according to claim 1, wherein said path selecting section manages a stream count being currently allocated and a maximum stream count to be allocated, for each said transfer destination route, and after continuously allocating said another transfer destination ~~routes~~ route until the stream count being currently allocated reaches the maximum stream count to be allocated, determines a still another transfer destination route.

15. (currently amended) A datagram relaying apparatus according to claim 1, wherein said path selecting section calculates an allocation rate of a stream count being currently allocated to a load distribution ratio for each said transfer destination route, and determines said transfer destination route having [[the]] a smallest allocation rate as said another ~~calculation result~~ transfer destination route, when determining said another transfer destination route for said received stream of packets.

16. (currently amended) A datagram relaying apparatus according to claim 1, wherein said path selecting section manages a stream count being currently allocated and a maximum stream count to be allocated, for each said transfer destination route, and determines said transfer destination route having [[the]] a smallest value when the stream count being currently allocated is divided by the maximum stream count to be allocated, as said another transfer destination route.

17. (original) A datagram relaying apparatus according to claim 1, wherein said path selecting section discards a correspondence between said transfer destination route and said received stream of packets when a packet does not arrive for a predetermined time.

18. (currently amended) A datagram relaying apparatus comprising:

a plurality of protocol terminating units;

a destination address extracting section ~~which extracts~~ to identify a destination address ~~data to determine a transfer destination route from a header data of~~ within a packet received from [[any]] one of said protocol terminating units;

a stream identifier calculating section ~~which calculates~~ to determine a stream identifier to identify a stream ~~from said header data of~~ associated with the packet ~~received from any of said protocol terminating units~~;

a route determining section ~~which determines~~ to determine a multi-path identifier to uniquely identify ~~a transfer path serving or~~ a plurality of transfer destination routes ~~as said transfer destination route,~~ based on said destination address [[data]];

~~a cache transfer path number memory which stores said stream identifier and said multi-path identifier in an address portion, and stores as a cache transfer path number, a transfer path number corresponding to said transfer path, based on a combination of said stream identifier and said multi-path identifier in a data portion;~~

~~a cache table accessing section which reads out said cache transfer path number corresponding to said combination of said stream identifier and said multi-path identifier from said cache transfer path number memory;~~

~~a transfer inhibition bit string memory which stores said multi-path identifier in an address portion, and stores in a data portion, a transfer inhibition bit string indicating whether or not transfer of the received stream of packets to said transfer path corresponding to said combination of the transfer path number and said multi-path identifier, for each said transfer path number, based on said multi-path identifier;~~

~~a transfer allocation path number memory which stores said multi-path identifier in an address portion, and stores in a data portion, said transfer path number corresponding to said transfer path as a transfer allocation path number, based on said multi-path identifier;~~

~~a transfer path memory which stores said multi-path identifier and said transfer path number in an address portion, and stores said transfer path in a data portion, based on said combination of said multi-path identifier and said transfer path number;~~

a path selecting section ~~which determines said~~ to:

identify one of the transfer destination routes, as a transfer path, ~~serving as said transfer destination route~~ for said ~~received stream of packets,~~ packet based on said multi-path identifier and said ~~cache transfer path number~~ stream identifier,

determine whether transfer of the packet on the transfer path is inhibited, and

identify another one of the transfer destination routes, as the transfer path, for the packet when transfer of the packet on the transfer path is inhibited; and

an output section selector ~~which transfers said received stream of packets~~ to transfer the packet to said transfer path;

~~wherein said destination address extracting section outputs said destination address data to said route determining section, said stream identifier calculating section outputs said stream identifier to said cache table accessing section and said path selecting section, said route determining section outputs said multi-path identifier to said cache table accessing section and said path selecting section;~~

~~said cache table accessing section outputs said cache transfer path number to said path selecting section, and~~

~~said path selecting section defines said cache transfer path number as said transfer path number, and reads out said transfer inhibition bit string based on said multi-path identifier, and determines whether or not the transfer of the packets to said transfer path corresponding to the combination of said transfer path number and said multi-path identifier is in an inhibition state based on the read out transfer inhibition bit string, and when the transfer of the packets to said transfer path is in the inhibition state, reads out said transfer allocation path number based on said multi-path identifier, and updates said transfer path number from said cache transfer path number to said read out said transfer allocation path number, and outputs said transfer path corresponding to said combination of the updated said transfer path number and said multi-path identifier to said output device selecting section~~.

19. (currently amended) A datagram relaying apparatus according to claim 18, further comprising an allocation inhibition bit string memory which stores said multi-path identifier ~~in an address portion,~~ and ~~stores in a data portion,~~ an allocation inhibition bit string indicating whether ~~or not~~ allocation of said ~~received stream of packets~~ packet to said transfer path ~~corresponding to said combination of the transfer path number and said multi-path identifier~~ is in [[the]] an inhibition state[[,]] for each said transfer ~~path number, based on said multi-path identifier~~ destination route,

wherein said path selecting section ~~reads out~~ is configured to read said allocation inhibition bit string based on said ~~input said~~ multi-path identifier~~, when updating said transfer~~

~~path number from said cache transfer path number to said transfer allocation path number, and specifies said transfer path number in which allocation of said received stream of packets is not in the inhibition state in the read out allocation inhibition bit string, and then updates said transfer allocation path number corresponding to said multi-path identifier in said data portion of said transfer allocation path number memory, based on the specified transfer path number~~ to determine whether transfer of the packet on the transfer path is inhibited.

20. (currently amended) A datagram relaying apparatus according to claim 18, further comprising:

an allocation stream count memory ~~which storing~~ to store said multi-path identifier, ~~and said~~ a transfer path number corresponding to the transfer path ~~in an address portion~~, and ~~storing in a data portion~~ an allocation stream count indicating [[the]] a stream count being currently allocated to said transfer path number~~, based on said combination of said multi-path identifier and said transfer path number~~; and

a maximum stream count memory ~~when stores~~ to store said multi-path identifier, [[and]] said transfer path number ~~in an address portion~~, and ~~stores in a data portion,~~ a maximum stream count indicating [[the]] a maximum stream count to be allocated to said transfer path number~~, based on said combination of said multi-path identifier and said transfer path number~~,

wherein said path selecting section reads [[out]] said allocation stream count and said maximum stream count ~~based on said combination of said transfer path number based on said input said cache transfer path number and said input said multi-path identifier,~~ and compares the ~~read out~~ allocation stream count with said maximum stream count, [[and]] when said allocation

stream count is greater than said maximum stream count, the path selecting section stores ~~a fact~~ an indicator that transfer of said ~~received stream of packets~~ packet to said transfer path ~~corresponding to said combination of said multi-path identifier and said transfer path number~~ is in an inhibition state ~~in said transfer inhibition bit string~~, and when said allocation stream count is ~~equal to or~~ less than said maximum stream count, the path selecting section stores ~~a fact~~ an indicator that the transfer of the packet to said transfer path ~~corresponding to said combination of said multi-path identifier and said transfer path number~~ is in a permission state ~~in said transfer inhibition bit string~~.

21. (currently amended) A datagram relaying apparatus according to claim [[18]] 19, wherein said path selecting section ~~stores a fact~~ is configured to store an indication that the allocation of said ~~received stream of packets~~ packet to said transfer path ~~corresponding to said combination of said multi-path identifier and said transfer path number~~ is in the inhibition state in said allocation inhibition bit string when [[said]] an allocation stream count is equal to or greater than [[said]] a maximum stream count, and ~~stores a fact~~ store an indication that the allocation of the ~~stream~~ packet to said transfer path ~~corresponding to said combination of said multi-path identifier and said transfer path number~~ is ~~at the~~ in a permission state in said allocation inhibition bit string[[,]] when said allocation stream count is less than said maximum stream count.

22. (currently amended) A datagram relaying apparatus according to claim 20, wherein said path selecting section updates the transfer path number by either adding or

subtracting ~~subtracts~~ one to or from said allocation stream count ~~corresponding to said combination of said multi-path identifier and said transfer path number corresponding to said cache transfer path number~~, ~~when updating said transfer path number from said cache transfer path number to said transfer allocation path number, and further adds one to said allocation stream count corresponding to the combination of said multi-path identifier and said transfer path number after said update, and~~ compares said added or subtracted allocation stream count ~~and said added allocation stream count~~ with said maximum stream count, and updates said ~~transfer~~ inhibition ~~bit string and said allocation inhibition bit string~~ state based on the comparison result~~,~~ ~~and specifies said transfer path number to update said transfer allocation path number stored in said transfer allocation path number memory, based on the updated transfer inhibition bit string and said allocation inhibition bit string~~.

23. (canceled)

24. (canceled)

25. (currently amended) A datagram relaying apparatus according to claim 20, wherein said path selecting section reads ~~out~~ said allocation stream count and said maximum stream count for each [[said]] transfer path number associated with each of the transfer destination routes based on said multi-path identifier, ~~when specifying said transfer path number in which the allocation of said received stream of packets is not in the inhibition state based on said transfer allocation path number, and~~ divides the ~~read out~~ allocation stream count by said

maximum stream count to calculate an allocation rate for each said transfer path number, and ~~then updates said~~ determines a transfer allocation path number ~~stored in said transfer allocation path number memory~~ based on said transfer path number ~~having the~~ with a smallest allocation rate.

26. (currently amended) A datagram relaying apparatus according to claim [[19]] 18, further comprising:

a continuous allocation count memory ~~which stores~~ to store said multi-path identifier ~~in an address portion,~~ and ~~stores in a data portion,~~ a continuous allocation count indicating [[the]] a stream count continuously allocated to [[said]] a transfer path number associated with the transfer path until [[this]] a current time~~, based on said multi-path identifier~~; and

a maximum continuous allocation count memory ~~which stores~~ to store said multi-path identifier, [[and]] said transfer path number ~~in an address portion~~, and ~~stores~~ a maximum continuous allocation count indicating the maximum stream count continuously allocated to said transfer path number ~~in a data portion, based on said combination of said multi-path identifier and said transfer path number~~,

wherein said path selecting section adds one to said continuous allocation count corresponding to said multi-path identifier, ~~after updating said transfer path number based on said transfer allocation path number read out from said transfer allocation path number memory,~~ [[and]] compares the added continuous allocation count with said maximum continuous allocation count, [[and]] specifies said transfer path number in which the allocation of said ~~received stream of packets~~ packet is not in [[the]] an inhibition state ~~in said allocation inhibition~~

~~bit string corresponding to said multi-path identifier,~~ when said continuous allocation count is equal to or greater than said maximum continuous allocation count, and ~~then updates said~~ determines a transfer allocation path number corresponding to said multi-path identifier ~~in said data portion of said transfer allocation path number memory~~ based on the specified transfer path number.

27. (canceled)

28. (canceled)

29. (currently amended) A datagram relaying apparatus according to claim 18, further comprising:

a channel identifier memory ~~which stores~~ to store a channel identifier corresponding to said transfer path ~~in a one-to-one correspondence relationship in an address portion, and stores~~ said multi-path identifier, and [[said]] a transfer path number ~~in a data portion, based on said channel identifier~~ associated with the transfer path;

an operation mode memory ~~which stores~~ to store said multi-path identifier ~~in an address portion,~~ and ~~stores~~ an operation mode indicating whether or not a fault has occurred on a physical link corresponding to said transfer path ~~in a data portion, based on said multi-path identifier~~; and

~~a transfer path state bit string memory which stores said multi-path identifier in an address portion, and stores in a data portion, a transfer path state bit string indicating whether or not the allocation of said received stream of packets and the transfer of said received stream of~~

~~packets to said transfer path corresponding for each said transfer path number are in the inhibition state because of said fault occurrence, based on said multi-path identifier,~~

wherein said path selecting section specifies said channel identifier corresponding to said transfer path corresponding to said physical link having said fault [[from]] based on a fault occurrence report signal~~, when said fault occurrence report signal reporting said fault occurrence is received~~ from said physical link, [[and specifies]] determines said transfer path number and said multi-path identifier corresponding to the specified channel identifier from said channel identifier memory, and updates said operation mode corresponding to the specified multi-path identifier to a fault occurrence state~~, and further stores the fact that the allocation of said received stream of packets and the transfer of said received stream of packets to said specified transfer path number are in the inhibition state in said transfer path state bit string corresponding to said specified multi-path identifier, reads out said operation mode corresponding based on said multi-path identifier received from said route determining section, when said stream is received from said protocol terminating unit, reads out said transfer path state bit string based on said multi-path identifier, when the read out operation mode indicates the fault occurrence state, and determines whether or not the allocation and transfer of said received stream of packets to said transfer path number are in the inhibition state in the read out said transfer path state bit string, and reads out said transfer allocation path number based on said multi-path identifier, when the allocation of said received stream of packets and the transfer of the stream to said transfer path number are in the inhibition state, and updates said transfer path number to the read out transfer allocation path number based on said cache transfer path number, and outputs said transfer path~~

~~corresponding to said combination of the updated transfer path number and said multi-path identifier to said output device selecting section~~.

30. (currently amended) A datagram relaying apparatus according to claim 29, further comprising:

a transfer path state bit string memory to store said multi-path identifier and a transfer path state bit string indicating whether allocation of said packet and transfer of said packet for each transfer path number associated with each of the transfer destination routes are in an inhibition state because of a fault occurrence,

wherein said path selecting section reads [[out]] said transfer path state bit string based on said multi-path identifier, when the transfer path state bit string ~~read out operation mode~~ indicates ~~the fault occurrence state based on said input said multi-path identifier, and specifies said transfer path number in which~~ that the allocation and transfer of said ~~received stream of packets~~ packet are not in the inhibition state, ~~in the read out transfer path state bit string, and then updates said~~ the path selecting section determines a transfer allocation path number corresponding to said multi-path identifier ~~in said data portion of said transfer allocation path number memory~~ based on ~~the specified~~ said transfer path number.

31. (currently amended) A datagram relaying apparatus according to claim 18, further comprising:

a usage path bit string memory ~~which stores~~ to store said multi-path identifier ~~in an address portion,~~ and ~~stores~~ a usage path bit string indicating one [[ore]] or more of said transfer

[[paths]] destination routes corresponding to the multi-path identifier ~~in a data portion, based on said multi-path identifier~~, wherein [[said]] a transfer path number corresponds to each of said transfer ~~paths different from each other in a one-to-one relationship~~ destination routes, ~~and said transfer path number is further constituted of the same data as the corresponding transfer path,~~ said path selecting section ~~stores said transfer path state bit string indicating whether or not the allocation and transfer of said received stream of packets to each transfer path number and each transfer path are in the inhibition state, and specifies said transfer path corresponding to said physical link having said fault from said fault occurrence report signal when said fault occurrence report signal reporting said fault occurrence is received from said physical link, and stores a fact that the allocation and transfer of said received stream of packets to the specified transfer path are in the inhibition state in said transfer path state bit string, and~~ reads [[out]] the ~~corresponding~~ usage path bit string based on said multi-path identifier received from said route determining section[[,]] when said ~~received stream of packets~~ packet is received from said one of said protocol terminating units, [[and]] determines presence or absence of said transfer path which is used in the ~~read out~~ usage path bit string ~~and in which the allocation and transfer of said received stream of packets are in the inhibition state in said transfer path state bit string, and determines whether or not the allocation and transfer of said received stream of packets to said transfer path number corresponding to said cache transfer path number received from said cache table accessing section are in the inhibition state based on said transfer path state bit string~~, in the case of the presence of said transfer path which is used in said usage path bit string ~~and in which the allocation and transfer of said received stream of packets are in the inhibition state in said transfer path state bit string, and reads out said~~ the path selecting section determines a transfer

allocation path number based on said multi-path identifier, ~~when the allocation and transfer of said received stream of packets to said transfer path number are in the inhibition state, and~~ updates said transfer path number based on the ~~read out~~ transfer allocation path number ~~based on said cache transfer path number~~, and [[then]] outputs the updated transfer path number to said output ~~device selecting~~ section selector, and

said output ~~device selecting~~ section selector transfers said ~~received stream of packets~~ packet based on said transfer path number received from said path selecting section.

32-36. (canceled)

37. (currently amended) A datagram relaying apparatus according to claim 19, wherein said allocation inhibition bit string ~~is composed of the~~ includes a number of bits equal to or greater than ~~kinds~~ a number of said transfer path numbers divided by the corresponding [[said]] multi-path identifier, and in each of the respective bits constituting said allocation inhibition bit string, each of the respective bits corresponds to said transfer path number divided by said multi-path identifier ~~in a one-to-one relationship, and a fact is stored indicating that the allocation of said received stream of packets to said transfer path corresponding to said corresponding said transfer path number for each said bit is in the inhibition state~~.

38. (currently amended) A datagram relaying apparatus according to claim [[29]] 30, wherein said transfer path state bit string ~~is composed of the~~ includes a number of bits equal to or greater than ~~kinds~~ a number of said transfer path numbers divided by the corresponding [[said]]

multi-path identifier, and in each of the respective bits constituting said transfer path state bit string, each of the respective bits corresponds to said transfer path number divided by said multi-path identifier ~~in a one-to-one relationship, and a fact is stored indicating that the allocation and transfer of said received stream of packets to said transfer path corresponding to the corresponding transfer path number for each said bit are in the inhibition state~~.

39. (canceled)

40. (currently amended) A datagram relaying apparatus according to claim [[33]] 18, further comprising:

an aging processing section ~~which detects said combination of~~ to determine when a packet for said transfer path ~~number~~ and associated with said multi-path identifier corresponding to said transfer path ~~to which said received stream of packets~~ is not transferred for a predetermined time, and ~~sets said cache transfer path number stored in said data portion of said cache transfer path number memory~~ set an indicator corresponding to ~~said combination of~~ said transfer path ~~number~~ and the ~~detected said~~ multi-path identifier[[,]] to [[the]] a non-registered state.

41. (currently amended) A datagram relaying apparatus according to claim 40, wherein said path selecting section subtracts one from [[said]] an allocation stream count corresponding to ~~said detected combination of~~ a transfer path number associated with said transfer path ~~number~~ and said multi-path identifier ~~to which said received stream of packets~~

associated with the packet that is not transferred for said predetermined time, and updates ~~said transfer inhibition bit string and said allocation inhibition bit string,~~ a memory based on the subtracted allocation stream count ~~and said maximum stream count~~.

42. (currently amended) A datagram relaying method comprising:

receiving a stream of packets; [[and]]

determining a transfer destination route for ~~each stream identifier of~~ said received stream of packets based on a combination of a stream identifier and a multi-path identifier associated with the received stream of packets; [[,]]

wherein said ~~step of~~ determining a transfer ~~path~~ destination route also includes:

determining whether ~~or not~~ the transfer of said received stream of packets to the determined transfer destination route is in an inhibition state~~, when said transfer destination route for said received stream of packets~~; and

determining another transfer destination route, when the transfer of said received stream of packets to said transfer destination route is in the inhibition state.

43. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining said transfer destination route or said another transfer destination route based on a load distribution ratio preliminarily set for each said transfer destination route.

44. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining whether or not the transfer of said received stream of packets to said transfer destination route is in the inhibition state[[,]] based on a comparison between a stream count being currently allocated and [[the]] a maximum stream count to be allocated, which are managed for each said transfer destination route.

45. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining that the transfer of said received stream of packets to said transfer destination route is in the inhibition state, when a stream count being currently allocated is greater than [[the]] a maximum stream count to be allocated.

46. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining whether ~~or not~~ allocation of said received stream to said another transfer destination route is in the inhibition state.

47. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining whether ~~or not~~ the allocation of said received stream of packets to said another transfer destination route is in the inhibition state[[,]] based on [[the]] a comparison

between a stream count being currently allocated and [[the]] a maximum stream count to be allocated, which are managed for each said transfer destination route, when said another transfer destination route is determined for said received stream of packets.

48. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining that the allocation of said received stream of packets to said another transfer destination route is in the inhibition state, when a stream count being currently allocated which is managed for each said transfer destination route is equal to or greater than [[the]] a maximum stream count to be allocated which is managed for each said transfer destination route.

49. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

allocating said received stream of packets allocated to said transfer destination route ~~having a fault~~ to said another transfer destination route, when [[said]] a fault has occurred on said transfer destination route.

50. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining said another transfer destination route based on [[said]] a fault occurrence managed for each said transfer destination route, when said another transfer destination route is determined.

51. (currently amended) A datagram relaying method according to claim 42, wherein said transfer destination route is managed individually based on each ~~single data~~ packet in the received stream of packets.

52. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining said another transfer destination route based on a preset predetermined order.

53. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

continuously determining said another transfer destination route for said received stream of packets ~~until arrival of~~ based on a maximum stream count to be continuously allocated, which is managed for each said transfer destination route; and

~~then,~~ determining still another transfer destination route for said received stream of packets.

54. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

changing said transfer destination route every time, when said another transfer destination route is determined for said received stream of packets.

55. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

~~continuously~~ determining ~~said still another~~ other transfer destination routes, until [[the]] a stream count being currently allocated which is managed for each said transfer destination route reaches [the]] a maximum stream count to be allocated which is managed for each said transfer destination route.

56. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

calculating an allocation rate of a stream count being currently allocated to [[said]] a load distribution ratio for each ~~said preset~~ said transfer destination route, when said another transfer destination route is determined for said received stream of packets; and

determining said transfer destination route having [[the]] a smallest allocation rate as said another transfer destination route.

57. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

determining as said another transfer destination route, said transfer destination route having [[the]] a smallest value when a stream count being currently allocated which is managed for each said transfer destination route is divided by [[the]] a maximum stream count to be allocated which is managed for each said transfer destination route, when said another transfer destination route is determined for said received stream of packets.

58. (currently amended) A datagram relaying method according to claim 42, wherein said ~~step of~~ determining a transfer ~~path~~ destination route includes:

discarding a correspondence between said received stream of packets and said transfer destination route ~~for said stream in which~~ when a packet of the received stream of packets does not arrive for a predetermined time.

59. (currently amended) A datagram relaying method comprising:

extracting a destination address [[data]] from header data of each of received packets of a stream to determine a transfer destination route for the stream of packets;

calculating a stream identifier to identify said stream from said header data of said ~~packet~~ packets;

determining a multi-path identifier to uniquely identify a ~~transfer path serving as said transfer destination route, or~~ a plurality of transfer destination routes[[,]] based on said destination address [[data]];

~~reading out said cache transfer path number from a cache transfer number memory for storing said stream identifier and said multi-path identifier in an address portion based on a combination of said stream identifier and said multi-path identifier and storing as a cache transfer path number, a transfer path number corresponding to said transfer path in a data portion based on said combination of said stream identifier and said multi-path identifier;~~

determining one of the transfer destination routes, as a transfer path ~~serving as said transfer destination route~~, for the stream of packets based on said multi-path identifier and said

stream identifier ~~cache transfer path number, by using a transfer path memory for storing said multi-path identifier and said transfer path number in an address portion, and for storing said transfer path in a data portion based on said combination of said multi-path identifier and said transfer path number~~; [[and]]

determining whether transfer of the stream of packets on the transfer path is inhibited;

determining another one of the transfer destination routes, as the transfer path, for the stream of packets when transfer of the stream of packets on the transfer path is inhibited; and

transferring said received stream of packets to said transfer path~~,~~

~~wherein said step of determining a transfer path includes:~~

~~defining said cache transfer path number as said transfer path number;~~

~~reading out a transfer inhibition bit string, based on said multi-path identifier, from a transfer inhibition bit string memory for storing said multi-path identifier in an address portion and storing in a data portion, said transfer inhibition bit string indicating whether or not transfer of said received stream of packets to said transfer path corresponding to said combination of said multi-path identifier and the transfer path number is in an inhibition state, for each said transfer path number, based on said multi-path identifier;~~

~~judging whether or not the transfer of said received stream of packets to said transfer path corresponding to said combination of said multi-path identifier and said transfer path number is in the inhibition state based on the read-out transfer inhibition bit string;~~

~~when the transfer of said received stream of packets to said transfer path is in the inhibition state, reading out a transfer allocation path number, based on said multi-path identifier, from a transfer allocation path number memory for storing said multi-path identifier in an~~

~~address portion, and storing as said transfer allocation path number, said transfer path number corresponding to said transfer path in a data portion, based on said multi-path identifier; and~~

~~updating said transfer path number from said cache transfer path number to said read out said transfer allocation path number~~.

60-82. (canceled)